



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,450	05/23/2006	Geoffrey Howard Blackham	GJ-281J	4200

7590
Iandiorio & Teska
Jason D Shanske
260 Bear Hill Road
Waltham, MA 02451-1018

EXAMINER

TRA, TUYEN Q

ART UNIT	PAPER NUMBER
----------	--------------

2873

MAIL DATE	DELIVERY MODE
-----------	---------------

05/27/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,450	Applicant(s) BLACKHAM, GEOFFREY HOWARD	
	Examiner TUYEN Q. TRA	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Roddy et al. (U.S. Pat. 6,762,785 B2).

With respect to claim 1, Roddy et al. discloses a first light source (figure 8, item 12), a primary modulator (figure 3, item 26R) for modulating light from the first light source (light coming from 12R to combiner 35, a modulated light source can be a light source), a second light source (figure 8, item 12BG), optical means (figure 8, item 35) for combining light from the second light source (12BG) with the modulated light from the primary modulator (12R), and an auxiliary modulator (figure 8, item 20) for modulating the combined light from the second light source (light coming from 12BG to combiner 35) and the modulated light from the primary modulator (12R) (col. 7, line 59 – col. 8, line 18).

With respect to claim 2, Roddy further discloses wherein the primary modulator (12) comprises a first primary modulator for modulating red light (figure 8, item 12R), a second primary modulator for modulating green light (figure 8, item 12G), and a third primary modulator for modulating blue light (figure 8, item 12B) (see figure 8).

With respect to claims 3 and 4, Roddy further discloses wherein the primary and auxiliary modulators are either transmissive or reflective light modulators (figure 8, item 20).

With respect to claim 5, Roddy further discloses wherein the first light source (12R) has a first spectral content (Red spectral) and the second light source (12BG) has a different (Blue-Green) spectral content.

With respect to claim 6, Roddy further discloses wherein the first light source has spectral content in the visible part of the spectrum (Red is visible spectral) and the second light source (12BG) has a spectral content in the infrared part.

With respect to claim 8, Roddy further discloses wherein the primary modulator (26R) is driven by a combination of output channels, and the auxiliary modulator (20) is also driven by a combination of output channels.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roddy et al. (U.S. Pat. 6,762,785 B2), as applied to claim 1 above, in view of Ohara et al. (US Patent 4,535,342).

Roddy et al. discloses a first light source (figure 8, item 12), a primary modulator (figure 3, item 26R) for modulating light from the first light source (light coming from 12R

Art Unit: 2873

to combiner 35, a modulated light source can be a light source), a second light source (figure 8, item 12BG), optical means (figure 8, item 35) for combining light from the second light source (12BG) with the modulated light from the primary modulator (12R), and an auxiliary modulator (figure 8, item 20) for modulating the combined light from the second light source (light coming from 12BG to combiner 35) and the modulated light from the primary modulator (12R) (col. 7, line 59 – col. 8, line 18); wherein the auxiliary modulator (20) is driven by a separate output channel. However, Roddy et al. does not disclose the primary modulator (26R) driven by an output channel. Within the same field of endeavor, Ohara et al. teaches the primary modulator (figure 1, item 3) driven by a separated output channel (column 2, lines 49-65).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the image generator with primary modulator such as disclosed by Roddy, and with the primary modulator (3) is driven by an output channel from the image generator such as discloses by Ohara et al., for purpose of driving the primary modulator.

Response to Amendment

5. Applicant's arguments filed on 02/27/2008 have been fully considered but they are not persuasive.

Applicant argues that the reference modulator 26R for the light source is not a spatial light modulator (in Remark, pages 7 and 8).

Examiner disagrees because applicant's claim 1 does not disclose "spatial light modulator". It is noted that the features upon which applicant relies (i.e., a spatial light

modulator) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In addition, Roddy's reference suggests that "shutter 26R" could be an acousto-optic modulator (see reference figure 8, element 26R; column 7, lines 65-67 or Figure 7, reference 32A; column 7, lines 37-39).

Furthermore, the combiner (figure 8, element 35) does a combining function. For example: light beams from light sources (12R), (12G), (12BG) and (12B) became one light beam after passing through combiner element (35).

Moreover, in figure 8, Roddy's spatial light modulator (20) is used to modulate the light come from beam combiner (35) (column 7, lines 34-44).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN Q. TRA whose telephone number is (571)272-2343. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L. Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tuyen Q Tra/
Examiner, Art Unit 2873

/Ricky L. Mack/
Supervisory Patent Examiner, Art Unit 2873